

**WE CLAIM AS OUR INVENTION:**

1. A network for evaluating medical data in a clinical study, comprising:
  - a plurality of disposable biochips respectively for a plurality of patients, each biochip containing a patient sample with multiple biomolecular markers;
  - a plurality of point of care test devices respectively at a plurality of point of care sites, each point of care test device receiving at least one of said biochips, as a tested biochip, and performing diagnostic testing on the sample in said tested biochip to obtain a diagnostic result, said test device making said diagnostic result available at said point of care site and formulating raw point of care data including said diagnostic result and identification of the multiple markers in the tested biochip;
  - a plurality of electronic patient records respectively for said patients;
  - a plurality of point of care data entry stations respectively having access to at least one of said electronic patient records and respectively in communication with said point of care test devices, each data entry station including means for entering the diagnostic result from the tested biochip into the electronic patient record for the patient, as a tested patient, who provided the sample in the tested biochip, and for entering additional information selected from the group consisting of diagnostic data and patient history data from the tested patient into the patient's electronic patient record, said diagnostic result and said additional information comprising clinical data;
  - a remote server and an evaluation system accessible by said remote server;

at least one data link between each point of care test device and each point of care data station, and said remote server, for transmitting said point of care raw data and said clinical data to said remote server; and

said evaluation system creating a new expert rule with improved diagnostic value using all of said point of care raw data and all of said clinical data.

2. A network as claimed in claim 1 wherein said evaluation system is an expert evaluation system operating according to expert rules, and wherein said expert evaluation system using said new expert rule to devise a measurement protocol.

3. A network as claimed in claim 2 wherein said expert system devises said measurement protocol for a selected pathology.

4. A network as claimed in claim 2 wherein said expert evaluation system automatically devises said measurement protocol.

5. A network as claimed in claim 2 further comprising a memory containing a plurality of measurement protocols accessible by said remote server, and wherein each point of care test device accesses said memory, via said data link, to obtain a selected measurement protocol for performing said diagnostic testing.

6. A network as claimed in claim 5 wherein said measurement protocol is for a specific pathology and employs a predetermined number of said biomolecular markers.

7. A network as claimed in claim 6 wherein the respective samples in said biochips contain more biomolecular markers than said predetermined number of biomolecular markers, and wherein each point of care test device conducts said diagnostic testing using all of the biomolecular markers in the sample of the tested

biochip to obtain augmented testing data, and wherein each point of care test device includes said augmented testing data in said raw point of care data.

8. A network as claimed in claim 1 wherein said means for entering the diagnostic result and for entering said additional information comprise means for entering patient history data characterizing whether said test result was a false positive, a false negative or correct.

9. A method for evaluating medical data in a clinical study, comprising the steps of:

obtaining a plurality of samples respectively from a plurality of patients and

storing the samples respectively in a plurality of disposable biochips, each of said samples including multiple biomolecular markers;

providing a plurality of point of care test devices respectively at a plurality of point of care sites;

respectively receiving said biochips in said point of care test devices, as a tested

biochip, and in each point of care test device performing diagnostic testing on the sample in the tested biochip to obtain a diagnostic result;

making the diagnostic result available at the point of care site;

formulating raw point of care data in each point of care test device including the

diagnostic result and an identification of the multiple markers in the tested biochip;

providing a plurality of electronic patient records respectively for said patients;

entering the diagnostic result into the electronic patient record for the patient, as a tested patient, who provided the sample in the tested biochip into the electronic patient record for the tested patient together with additional

information selected from the group consisting of diagnostic data and patient history data, said diagnostic result and said additional information comprising clinical data;

providing a remote server at a location remote from said point of care sites;

supplying the raw point of care data and the clinical data from all of the point of care sites to said remote server; and

at said remote server, creating a new rule with improved diagnostic value using all of said raw point of care data and all of said clinical data.

10. A method as claimed in claim 9 wherein the step of creating a new rule comprises creating a new rule for devising a measurement protocol.

11. A method as claimed in claim 10 wherein the step of creating a new rule comprises creating a new rule for a measurement protocol for a selected pathology.

12. A method as claimed in claim 10 wherein the step of creating a new rule comprises automatically creating a new rule for said measurement protocol.

13. A method as claimed in claim 10 comprising storing a plurality of measurement protocols in a memory accessible from said remote server, and wherein the step of performing diagnostic testing in each point of care test device comprises establishing a data communication between a point of care test device and said memory to obtain a selected measurement protocol from said memory for use in said point of care test device for performing said diagnostic testing.

14. A method as claimed in claim 13 wherein each of said measurement protocol employs a predetermined number of said biomolecular markers.

15. A method as claimed in claim 14 comprising providing more biomolecular markers in each sample than said predetermined number and wherein the step of performing diagnostic testing includes performing diagnostic testing using said selected measurement protocol and also employing additional biomolecular markers in the sample of the tested biochip, beyond said predetermined number, to obtain augmented testing data, and including said augmented testing data in said raw point of care data.

16. A method as claimed in claim 9 comprising the additional step of conducting a follow-up examination of the tested patient to determine follow-up information indicating whether said test result was a false positive, a false negative or correct, and wherein the step of entering said diagnostic result and said additional information into the electronic patient record for the tested patient includes entering said follow-up information into the electronic patient record as at least a part of said patient history data.